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EXAMINER	
LIU, BEN H	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,887	DAYAL ET AL.	
	Examiner	Art Unit	
	Ben H. Liu	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *12 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *October 12, 2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to an amendment/response filed on October 12, 2007.

2. Claims 1, 7-10, 13-14, 18-19, 24-27, 30, 32-33, 37, and 44 have been amended.

3. No claims have been cancelled.

4. No claims have been added.

5. Claims 1-44 are currently pending.

Specification

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-7, 13, 19-26, 34-36 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Larsen et al. (U.S. Patent Publication Number 2004/0047286).

For claims 1 and 34, Larsen et al. disclose a method and system for hitless switch management module failover, the method comprising at a first switch management module in a switch, operating in a master mode *(see paragraph 19, which recites an active control blade)*. Operating in the master mode includes performing packet forwarding and participating in network protocols, maintaining packet forwarding and protocol state information *(see paragraph 23, which recites maintaining layer 2 forwarding databases and protocol state machines)*, and communicating the packet forwarding and protocol state information to a second switch management module operating in a slave mode *(see paragraph 35, which recites synchronizing state information between the active and standby control blades)*. The second switch management module in the switch operates in a slave mode *(see paragraph 19, which recites an standby control blade)*, wherein operating in a slave mode includes continuously monitoring the operational state of the first switch management module, receiving the packet forwarding and protocol state information from the first switch management module *(see paragraph 33, which recite keeping the state of the active and standby control blades synchronized over time)*, and in response to detecting failure of the first switch management module, switching to the master mode and resuming network protocol operation from a state in which the first switch management module last operated correctly based on the received packet forwarding and protocol state information *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover)*.

For claim 2, Larsen et al. discloses the method for hitless switch management module failover wherein performing packet forwarding includes performing at least one of layer 2 and layer 3 packet forwarding *(see paragraph 31)*.

For claim 3, Larsen et al. disclose the method for hitless switch management module failover wherein participating in network protocol includes participating in at least one of layer 2 and layer 3 network protocols *(see paragraph 31)*.

For claims 4 and 36, Larsen et al. disclose the method and system for hitless switch management module failover wherein participating in layer 2 network protocols includes participating in a spanning tree protocol *(see paragraph 117)*.

For claim 5, Larsen et al. disclose the method for hitless switch management module failover wherein maintaining packet forwarding information includes maintaining layer 2 packet forwarding tables *(see paragraph 31)*.

For claim 6, Larsen et al. disclose the method for hitless switch management module failover wherein storing protocol state information includes storing layer 2 protocol state information *(see paragraph 31)*.

For claim 7, Larsen et al. disclose a method and system for hitless switch management module failover, the method comprising at a first switch management module in a switch, operating in a master mode *(see paragraph 19, which recites an active control blade)*. Operating in the master mode includes performing packet forwarding and participating in network protocols, maintaining packet forwarding and protocol state information *(see paragraph 23, which recites maintaining layer 2 forwarding databases and protocol state machines)*, wherein maintaining packet forwarding information includes maintaining layer 2 spanning tree protocol

information *(see paragraph 117, which recite synchronizing the state of the Rapid Spanning Tree Protocol)* and communicating the packet forwarding and protocol state information to a second switch management module operating in a slave mode *(see paragraph 35, which recites synchronizing state information between the active and standby control blades)*. The second switch management module in the switch operates in a slave mode *(see paragraph 19, which recites an standby control blade)*, wherein operating in a slave mode includes continuously monitoring the operational state of the first switch management module, receiving the packet forwarding and protocol state information from the first switch management module *(see paragraph 33, which recite keeping the state of the active and standby control blades synchronized over time)*, and in response to detecting failure of the first switch management module, switching to the master mode and resuming network protocol operation from a state in which the first switch management module last operated correctly based on the received packet forwarding and protocol state information *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover)*.

For claim 13, Larsen et al. disclose the method for hitless switch management module failover wherein communicating the protocol state information to the second switch management module includes communicating the protocol state information in response to changes in the protocol state information *(see paragraph 48)*.

For claim 19, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating a first switch management module in a switched network element in a master mode, wherein

operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines)*. The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information between the active and standby control blades)*. The method further comprises storing a second software version in memory, rebooting the second switch management module using the second software version, and distributing protocol state and packet forwarding information from the first switch management module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and standby control blades that use different versions of the control blade software)*. At the second switch management module, the method further comprises switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover)*.

For claim 20, Larsen et al. disclose the method for hitless software upgrade or downgrade in a switched network element wherein operating the first switch management module in the master mode includes performing layer 2 packet forwarding operations *(see paragraph 31)*.

For claim 21, Larsen et al. disclose the method for hitless software upgrade or downgrade in a switched network element wherein participating in network protocols using a first software version includes participating in layer 2 network protocols *(see paragraph 31)*.

For claim 22, Larsen et al. disclose the method for hitless software upgrade or downgrade in a switched network element wherein participating in layer 2 network protocols includes participating in a spanning tree protocol *(see paragraph 31)*.

For claim 23, Larsen et al. disclose the method and system for hitless software upgrade or downgrade in a switched network element wherein operating the second switch management module in the slave mode includes storing the packet forwarding and protocol state information received from the first switch management module *(see paragraph 35)*.

For claim 24, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating a first switch management module in a switched network element in a master mode, wherein operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines)*. The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information*

between the active and standby control blades). The method also comprises storing the packet forwarding and protocol state information received from the first switch management module *(see paragraph 35, which recites storing the state information in a database using the appropriate database format)* and operating the second switch management module without performing packet forwarding or participating in network protocols *(see paragraph 72, which recites receiving configuration changes but not acting upon them).* The method further comprises storing a second software version in memory, rebooting the second switch management module using the second software version, and distributing protocol state and packet forwarding information from the first switch management module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and standby control blades that use different versions of the control blade software).* At the second switch management module, the method further comprises switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover).*

For claim 25, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating

a first switch management module in a switched network element in a master mode, wherein operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines)*. The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information between the active and standby control blades)*. The method further comprises storing a second software version in memory, wherein storing the second software version in memory associated with the second switch management module includes obtaining the second software version from a server and storing the second version in memory associated with the second switch management module *(see paragraphs 29 and 127, which recite control software and memory which can be used to upgrade the control software)*, rebooting the second switch management module using the second software version, and distributing protocol state and packet forwarding information from the first switch management module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and standby control blades that use different versions of the control blade software)*. At the second switch management module, the method further comprises switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational

state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover).*

For claim 26, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating a first switch management module in a switched network element in a master mode, wherein operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines).* The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information between the active and standby control blades).* The method further comprises storing a second software version in memory, rebooting the second switch management module using the second software version, wherein rebooting the second switch management module includes performing a soft reboot of the second switch management module wherein software is reset, but hardware is not *(see paragraph 69, which recites upgrading the control software and allowing it to reboot),* and distributing protocol state and packet forwarding information from the first switch management module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and standby control blades that use different versions of the control blade software).* At the second switch management module, the method further comprises

switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover).*

For claim 32, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating a first switch management module in a switched network element in a master mode, wherein operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines).* The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information between the active and standby control blades).* The method further comprises storing a second software version in memory wherein the first software version is newer than the second software version, rebooting the second switch management module using the second software version, and distributing protocol state and packet forwarding information from the first switch management module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and*

standby control blades that use different versions of the control blade software). At the second switch management module, the method further comprises switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover).*

For claim 33, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element comprising the following steps. The method comprises operating a first switch management module in a switched network element in a master mode, wherein operating in the master mode includes forwarding packets and participating in network protocols using a first software version *(see paragraphs 19 and 23, which recite an active control blade that maintains layer 2 forwarding databases and protocol state machines).* The method also comprises operating a second switch management module in a slave mode, wherein operating in a slave mode includes monitoring the operational state of the first switch management module using the first software version *(see paragraph 35, which recites synchronizing state information between the active and standby control blades).* The method further comprises storing a second software version in memory wherein the first software version is older than the second software version, rebooting the second switch management module using the second software version, and distributing protocol state and packet forwarding information from the first switch management

module executing the first software version to the second switch management module executing the second software version *(see paragraph 69 and 70, which recite synchronizing the active and standby control blades that use different versions of the control blade software)*. At the second switch management module, the method further comprises switching from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover)*.

For claim 35, Larsen et al. disclose a method for hitless software upgrade or downgrade in a switched network element wherein the first switch management module is adapted to store layer 2 protocol state information and to periodically distribute the layer 2 protocol sate information to the second switch management module *(see paragraph 33)*.

For claim 44, Larsen et al. disclose a method and system for hitless switch management module failover, the method comprising at a first switch management module in a switch, operating in a master mode *(see paragraph 19, which recites an active control blade)*. Operating in the master mode includes performing packet forwarding and participating in network protocols, maintaining packet forwarding and protocol state information *(see paragraph 23, which recites maintaining layer 2 forwarding databases and protocol state machines)*, and communicating the packet forwarding and protocol state information to a second switch

management module operating in a slave mode *(see paragraph 35, which recites synchronizing state information between the active and standby control blades)*. The second switch management module in the switch operates in a slave mode *(see paragraph 19, which recites an standby control blade)*, wherein operating in a slave mode includes continuously monitoring the operational state of the first switch management module, receiving the packet forwarding and protocol state information from the first switch management module *(see paragraph 33, which recite keeping the state of the active and standby control blades synchronized over time)*, and in response to detecting failure of the first switch management module, switching to the master mode and resuming network protocol operation from a state in which the first switch management module last operated correctly based on the received packet forwarding and protocol state information *(see paragraph 48, which recites constantly sending state updates to the standby control blade. As a result, the standby control blade will resume operation in the last operational state of the active control blade in the case of a failover)*. Operating in the slave mode further comprises a user interface operatively associated with at least one of the first and second switch management modules for allowing a user to manually initiate a failover from the first switch management module to the second switch management module *(see paragraph 69, which recite switching an active control blade into standby mode to perform a failover during a software upgrade)*.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 8-12, 27-29, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al. (U.S. Patent Application Publication 2004/0047286) in view of Phadke (U.S. Patent Application Publication 2004/0034703).

For claims 8-12, 27-29, and 37-39, Larsen et al. disclose all subject matter of the claimed invention with the following exceptions:

A method and system for hitless switch management module failover wherein communicating the packet forwarding and protocol state information to the second management module includes communicating the information using a canonical message format as recited in claims 8, 27, and 37.

A method and system for hitless switch management module failover wherein using a canonical message format includes sending data structures in messages in which fields are decodable by the second switch management module independently of the order in which the fields are placed in the messages as recited in claim 9.

A method and system for hitless switch management module failover wherein using a canonical message format includes defining messages types, lengths, and values recognizable by the first and second switch management modules and formatting messages sent from the first switch management module to the second switch management module utilizing the types, lengths, and values as recited in claim 10.

A method and system for hitless switch management module failover comprising communicating a first data structure from the first switch management module to the second switch management module utilizing the types, lengths, and values, wherein the second switch management module includes a second data structure that has different fields from the first data structure, and wherein the second switch management modules uses the types, lengths, and values to update fields in the second data structure corresponding to fields in the first data structure as recited in claims 11.

A method and system for hitless switch management module failover wherein the second switch management module sets fields in the second data structure that do not correspond to fields in the first data structure to default values as recited in claims 12, 29, and 39.

A method and system for hitless switch management module failover comprising, at the second switch management module, updating fields in data structures that correspond to fields in data structures at the first switch management module based on the canonical messages as recited in claim 28.

A method and system for hitless switch management module failover wherein first and second switch management modules includes at least one corresponding data structure with different fields, wherein the second switch management module is adapted to use data received via a canonical message to update fields in its data structure that correspond to fields in the data structure maintained by the first switch management module as recited in claim 38.

Phadke from the same or similar fields of endeavor disclose a framework which allows for generic protocol definition for defining a data packet format *(see paragraphs 29-54)*. The framework allows each field of the data packet to be decoded using protocol definition tables *(see paragraph 6)*. This allows each field to be decoded independently of the order of the field in the packet. The framework allows for definition of the message such as types, lengths, and values *(see paragraph 42)*. Further, the fields received by the first network node does not need to correspond with the fields received by the second network node because each field of the packet may be individually decoded with the identified decode handler *(see paragraph 6)*. Using this framework, each individual field value can be updated across the two network nodes. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to

use the system and method for decoding communications using a packet format framework as taught by Phadke with the method and system for hitless switch management module failover as taught by Larsen et al. The system and method for decoding communications using a packet format framework as taught by Phadke can be implemented by software *(see paragraph 8)* in the method and system for hitless switch management module failover as taught by Larsen et al. The motivation for using the system and method for decoding communications using a packet format framework as taught by Phadke with the method and system for hitless switch management module failover as taught by Larsen et al. is to allow better compatibility of various protocols to allow nodes in a network to communicate.

13. Claims 14-18, 30-31, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al. (U.S. Patent Application Publication 2004/0047286) in view of Kajizaki et al. (U.S. Patent 7,274,711).

For claims 14-17, 30-31, and 40-43, Larsen et al. disclose all subject matter of the claimed invention with the following exceptions:

A method and system for hitless switch management module failover wherein the first switch management module is adapted to use a bracketing mechanism to transfer related messages as atomic units to the second switch management module as recited in claims 14, 30, and 40.

A method and system for hitless switch management module failover wherein wherein the first switch management module is adapted to send an open bracket indicator to the second

switch management module to initiate transfer of message containing related information as recited in claims 15 and 41.

A method and system for hitless switch management module failover wherein the second switch management module is adapted to discard messages received after the open bracket indicator if a close bracket indicator is not received as recited in claims 16, 31, and 42.

A method and system for hitless switch management module failover wherein the second switch management module is adapted to process messages received after the open bracket indicator and to update the corresponding protocol state information in response to receiving the close bracket indicator within the predetermined time period as recited in claims 17 and 43.

Kajizaki et al. from the same or similar fields of endeavor disclose combining packets for transmission across a network based upon the attribute of the information carried in each packet *(see column 1 lines 54-61)*. A received packet that is determined to be a portion of combined packets is stored in a buffer *(see column 6 lines 1-34)*. A total length data field contained in the IP header of the combined packet is used to determine the number of individual packets contained within the combined packet *(see figure 12)*. This value can be used to verify whether all the packets expected from the combined packet has arrived. If all the packets have arrived, then the information stored within can be retrieved. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine packets for transmission across a network based upon the attribute of the information carried in each packet as taught by Kajizaki et al. with the method and system for hitless switch management module failover as taught by Larsen et al. The method for combining packets for transmission across a network based upon the attribute of the information carried in each packet as taught by Kajizaki et al. can

be implemented with the method and system for hitless switch management module failover as taught by Larsen et al. by deploying the network relay apparatus comprising an assembling and disassembling unit between the master and slave switch management modules. The motivation for combining packets for transmission across a network based upon the attribute of the information carried in each packet as taught by Kajizaki et al. with the method and system for hitless switch management module failover as taught by Larsen et al. is to reduce network load.

For claim 18, Larsen et al. disclose a method and system for hitless switch management module failover, the method further comprising the step after the second switch management module switches to the master mode, detecting no-hitless operation and a cause for the non-hitless operation communicating the cause of the first switch management module *(see paragraph 73, which recites a standby control blade that will send a synchronization request when it becomes the active control blade. This provides the new active control blade with the state of the failed control blade).*

Response to Arguments

14. Claims 1-33 was previously objected for various informalities. The applicant has overcome the objections by amending the claims. In response, the examiner has withdrawn the objections.

15. Upon further consideration, claims 1-44, even if previously indicated as allowable subject matter if rewritten in independent form including all the limitations of the base claim and any intervening claims, are not allowable because the limitations are taught by the admitted prior art.

16. Presently, claims 1-7, 13, 19-26, 34-36 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Larsen et al. (U.S. Patent Publication Number 2004/0047286). Claims 8-12, 27-29, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al. (U.S. Patent Application Publication 2004/0047286) in view of Phadke (U.S. Patent Application Publication 2004/0034703). Claims 14-18, 30-31, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al. (U.S. Patent Application Publication 2004/0047286) in view of Kajizaki et al. (U.S. Patent 7,274,711).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *(see form PTO-892).*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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